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INTRODUCTION

TO THE

STUDY OF INDIAN LANGUAGES,

WITH WORDS, PHRASES, AND SENTENCES TO BE COLLECTED.

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In March, 1861, the Smithsonian Institution published a paper entitled "Instructions for research relative to the Ethnology and Philology of America," prepared by Mr. GEORGE GIBBS; an octavo pamphlet of 51 pages, divided into two parts—the first relating to general Ethnology, the second to Philology. Under the first head Mr. Gibbs treated of the facts that should be observed and the material collected relating to "crania," "specimens of art," &c., &c., "names of tribes," "geographical position," "number," "physical constitution," "picture writing," "dress," "food," "dwelling," "arts," "trade," "religion," "government," "social life," "war," "medicines," "literature," "calendar and astronomy," "history and antiquities." Under the head of Philology he gave a brief account of some of the peculiarities of the Indian languages, with general directions for the best methods of collecting certain words; a simple and practical alphabet; and a comparative vocabulary in English, Spanish, French, and Latin. This vocabulary contains 211 words. The whole was followed by Appendix A, "Physical character of the Indian races," with a tabulated statement on particulars of inquiry, and Appendix B, "Numeral Systems." The paper was distributed widely among the missionaries, Indian agents, travelers, and local collectors in Ethnology, and has served a valuable purpose, resulting in the collections, by various persons, of a large number of vocabularies comprising all or nearly all of the languages and dialects of the Indian tribes of the United States and many in British America and Mexico. It served also to direct inquiry in the several branches of Ethnography, of which it treats, resulting in the collection of many valuable notes and minor papers on this subject. It has also led to the collection of a great many articles illustrating the industries, arts, means of subsistence, &c., found among the Indian tribes. It has in fact greatly stimulated investigation, giving wiser direction to inquiry, and the results have abundantly proved the value of the "Instructions" and the wisdom of its publication; and it serves to mark an epoch in the history of ethnographic investigation in America. The material which has thus been accumulated is of great amount, and its study has led to such important conclusions that it is deemed wise to prepare a new system of instruction, more comprehensive in plan and more elaborate in detail. First, it is found necessary to enlarge the alphabet so as to include a greater number of sounds, which have been discovered in the North American languages, and to mark other letters with greater precision. Second, it is necessary to enlarge the vocabulary so as to modify it somewhat, as experience has dictated, so that new words may be collected. Third, it is desirable that many simple phrases and sentences should be given—so chosen as to bring out the more important characteristics of grammatic structure.

In Mythology so much has already been done that it is possible to construct an outline of North American mythology and to give many of its important characteristics. Much has also been discovered in the social and governmental organization of the Indian tribes. This branch of investigation has been carried on to such an extent that many interesting conclusions have been reached, especially by Mr. LEWIS H. MORGAN, and the subject has been placed on a new and scientific basis. In like manner an advanced stage of study has been reached in all the other branches of ethnographic investigation, and that proper advancement may be made in the future, by taking advantage of what has been done in the past, it is proposed to publish a "Manual of North American Ethnography," which will give a brief outline of the subject in its several departments, with instructions and hints to the student.

The present paper is to be one of the chapters in this manual. In its preparation, the alphabet was considered to be of prime importance. After devoting much time to the consideration of the subject, and the examination of many alphabets devised by scholars and linguists, none was found against which there was not serious objections, and the author attempted to devise an alphabet which would contain all the supposed requirements; but there were many difficulties in the way, and many compromises to be made in weighing the various considerations. At this stage of the work he applied to the eminent philologist, Professor W. D. WHITNEY, for assistance. After much consultation and the weighing of the many considerations arising from the large amount of manuscript material in the author's hands, Professor WHITNEY kindly prepared the following paper

ON THE ALPHABET.

In dealing with a new Indian language in a practical way, one of the first things to be done will naturally be to determine how it shall be written down; what sounds it has, and what characters shall be used to represent them.

This is by no means an easy matter. It is always hard to understand the sounds of an unfamiliar language so thoroughly as to be able to reproduce them with accuracy. Moreover, no two languages are made up of precisely the same sounds. Every Indian tongue will be found to contain

simple sounds, or combinations of sounds, which are unknown in English, and of which the peculiarities may be hard to appreciate and describe. Long-continued acquaintance with a language always shows an observer to have been more or less in the wrong in his first ideas of its phonology or sound-system. Then, the English alphabet is rather scanty, and very much confused in its usages, so that one is puzzled as to how he shall best adapt it to represent any strange tongue to which he wishes to apply it.

There is no absolute way out of these difficulties. They can only be lightened, not got rid of altogether. The fundamental rule for dealing with them is that every observer be as careful as possible, and always consistent with himself in the use of whatever system he may adopt; taking pains also to explain as well as he can what he intends by the signs he uses.

But some ways of using the English letters are much preferable to others, both in themselves and because of their accordance with ways already adopted by collectors and scholars; and it is very desirable to suggest a general alphabet for collectors, which they shall be counseled to learn to understand and use. And since any one is greatly helped in analyzing and noting the sounds of a strange language by having paid a little attention to the general system of the alphabet, and the relation of the ordinary sounds to one another, it is proposed, instead of merely setting up an alphabet, to give along with it some very simple and elementary explanations of the sounds noted, or notions of phonology; having in view especially the sounds of the English language.

VOWELS.

The vowel sounds which are found most widely among human languages are the five occurring in these English words:

far, they, pique, note, rule.

Each of these sounds is represented in English by a number of letters or combinations of letters, from two up to a dozen or so. It is proposed to take for their signs the vowel-letters by which they are written in the words above given; namely,

<i>a</i>	<i>e</i>	<i>i</i>	<i>o</i>	<i>u</i>
<i>far</i>	<i>they</i>	<i>pique</i>	<i>note</i>	<i>rule</i>

The reason is that these are the signs which originally had the five values in question, and which have them still in most languages outside of English—for example, in Italian and German, and, less uniformly, in French. They are generally called the “continental” signs, as being so used in all Europe except the British isles.

Any given vowel-sound is apt to be found in the same language having two different quantities, one long and one short. Often there is also a slight difference of quality or tone added to that of quantity. This difference of tone between the long and short values of what is nearly the same sound is greater in English than in almost any other language. The corresponding shorter sound to the long *e* of *they* is the sound in *then* or *head*; the short sound to *pique* is that in *pick*; the short sound to *rule* is that in *pull*. But the English has no real short *o*, except in the “Yankee” pronunciation of a few words like *home*, *whole*, *none*. Nor has it a real short sound corresponding to the *a* of *far* and *father*; the so-called “short *o*” of *not* and *what* and their like is our nearest approach to it, and near enough to bear being called a short *a*.

The usual way, all over the world, to distinguish the long and short values of vowels is to write a horizontal mark (the “maeron”) over the long vowel, and a crescent (the “breve”) over the short. Thus we might signify the five short vowels, treated of above, in this manner:

<i>ă</i>	<i>ĕ</i>	<i>ĭ</i>	<i>ô</i>	<i>û</i>
<i>what</i>	<i>then</i>	<i>pick</i>	[<i>whole</i>]	<i>pull</i>

The relations of quantity are so different in different languages that it may be best left, probably, to the judgment of the collector whether he will mark the long values of the vowels with the *maeron*, or the short with the *breve*; to do both would generally be needless. Unless, indeed (as is the case in some Indian languages), there be three grades of quantity to distinguish, a drawn out or protracted long, a medium or ordinary long, and a short; in that case both signs would have to be used, the medium quantity only being left unmarked.

Then there are three other simple vowel-sounds in English, for which it is not so easy to provide the most appropriate and acceptable signs.

One of these is the sound in *ave*, *ought*, *all*, *lord*, and so on. It is a tone intermediate between the *a* of *far* and the *o* of *note*, and the *ă*-sound of *not* or *what* comes just about as near to being its corresponding short as to being that of *a* (*far*). It may be as well written by *ä* as by any other sign, and this is its proposed representative.

The second is the sound in *cat*, *man*, and so on, the one which we usually call “short *a*,” or “flat *a*”; it is an intermediate between *ä* (of *far*) and *e* (of *they*). This it is proposed to write *â* (nearly following the German *ä*).

The third is the sound which we have in words like *but*, *son*, *blood*. It is often called the “neutral vowel,” because in its utterance the organs of the mouth are nearly in the indefinite position of simple breathing. It is nearly like the German *ö* and the French *eu*, but not the same with either. As it is called by us “short *u*,” and to one accustomed to English, seems most naturally represented by a *u*, the sign *û* has been here adopted for it.

The peculiar sound of the French *u* in *tu*, *pure*, *mûr*, etc., or of the German *ü* in *kühl*, *küssen*, etc., will, whenever found, be best written with the German sign *ü*. It is made by a combination of the tongue-position by which *î* (pique) is uttered with the lip-position by which *û* (rule) is uttered.

We have, then, the four additional vowels—

<i>ä</i>	<i>â</i>	<i>û</i>	<i>ü</i>
<i>all</i>	<i>cat</i>	<i>but</i>	[<i>kühl mûre</i>].

Their long and short values may be distinguished by the same added marks as those of the other vowels, if it should be necessary to do so.

What we call the “long *i*” of *aiste*, *isle*, etc., is really a compound sound, a diphthong, beginning with *a* (*far*) and running down and ending with *i* (*pique* or *pick*). It is, therefore, to be written with *ai*.

The sound in *how*, *out*, etc., is in a precisely similar manner a compound, beginning with *a* (*far*) and running down to *u* (*rule* or *full*). It is accordingly to be represented by *au*.

If such a diphthong as ours in *boil* or *boy* is met with it must of course be represented by *âi*, the signs for its two parts.

What we call “long *u*,” as in *use*, *pure*, *meu*, *feud*, etc., is clearly a double sound, precisely that of *you*, and can never be written with one character in any phonetic alphabet; its proper representative is *yu*.

We have, then, finally, the diphthongs—

<i>ai</i>	<i>au</i>	<i>âi</i>
<i>mine</i>	<i>down</i>	<i>boil</i> .

The nasal vowels will be spoken of further on.

The scheme of representation of vowel sounds thus drawn out is believed to be as good as any that is attainable without departing too far from English usages, or bringing in strange and complicated signs, for which types are not to be found in ordinary printing offices. It will, of course, seem a little strange at first to one accustomed to English ways; but there must be a consistent system followed, and that excludes the acceptance of English ways. A little careful practice will give ready command of the scheme of signs. It is proposed as a basis, a model which is to be adhered to as closely as circumstances shall allow, in representing the strange sounds that may be met with in practice. Its use will not take away the necessity of careful description, nor will it answer all purposes. A language may, for example (like French and German), distinguish two *e*-sounds, a closer (French *ê*) and an opener (French *è* or *é*, akin respectively with our *ê* (*they*) and *è* (*then*), but not, like these, differing in quantity, as long and short. In such a case it will be best to use *ê* for the opener sound; and we may also need an *ô* for an opener *o*, and even an *f* for an opener *i* (akin with our short *i* of *pick*). And there may be varieties of the “neutral vowel” for which the German *ö* will be a convenient sign.

CONSONANTS.

Among the consonants we will first take up some of those as to whose mode of representation there can be no question whatever. There are, for example, the three so-called "mutes," *p*, *t*, and *k*; these signs belong to the sounds instanced below:

<i>p</i>	<i>t</i>	<i>k</i>
<i>prop</i>	<i>trout</i>	<i>creak</i> .

The last example shows that we use *c* as well as *k* with this value; that must, of course, be avoided in a systematic alphabet.

The *t* and *k* of other languages often do not precisely agree in character with ours; one should be on the look-out here (as, indeed, everywhere else) for differences, and should note and describe them, if possible.

Of these three, the *p* is called a "labial" mute, because made with the lips; the *t* a "lingual" (or "dental"), because made with the tongue-tip (and near the teeth), the *k* a "palatal" or "guttural," because made against the palate, or near the throat, with the back part of the tongue.

Then there are three other mutes, closely related with these; they and their examples are these:

<i>b</i>	<i>d</i>	<i>g</i>
<i>blab</i>	<i>dread</i>	<i>grog</i> .

They differ from the three preceding in that there is tone, audible sound, made in the throat during the continuance of the contact by which they are produced. They are, therefore, properly called the "sonant" mutes, while the others are called the "surd," or "non-sonant," or "toneless" mutes—or something equivalent to this (the names "hard" and "soft," and their like, are altogether to be rejected). Usually, a language has both the surd and sonant corresponding mutes—*t* and *d*, *p* and *b*, *k* and *g*—if it has either.

In some languages the mutes (especially the surd ones) are sometimes uttered in such a way that there is a little perceptible puff of breath, a kind of *h* sound, between them and the following sound. In such cases they are said to be "aspirated," or the resulting sounds are called "aspirates." They may be best written with a so-called "rough-breathing" (Greek), or reversed apostrophe, after the letter; thus,

p' b' t' d' k' g'.

All these sounds are called mutes because the mouth-organs are so closed in making them that no breath escapes until the closure is broken or exploded.

If, now, with just the same positions of the mouth-organs the breath is suffered to pass into or through the nose, the result is the so-called "nasal mutes," or "nasal consonants," or simply "nasals." Generally, a language has a nasal corresponding to each pair of non-nasal mutes (surd and sonant). So, in English we hear the labial nasal *m*, the lingual nasal *n*, and the palatal nasal, in *sing*, *bring*, etc. This last is just as simple a sound as either of the others, but we have no simple sign for it, and write it with *ng*. If this double sign, or "digraph," were adopted as its representative, we should have difficulty in distinguishing the simple nasal, as in *singer*, from the nasal followed by a *g*-sound, as in *finger*. The best single substitute is *ñ*, because it is always to be found in the printing offices.

The nasals, then, are—

<i>m</i>	<i>n</i>	<i>ñ</i>
<i>mum</i>	<i>nun</i>	<i>singñ</i> .

The nasal mutes are made, as above defined, with complete closure of the mouth-organs, and get their peculiar nasal quality from the ringing of the expelled air in the nose. But if the same nasal ringing is made while the mouth-organs are in a position which produces a vowel (part of the breath being driven through the mouth, as in ordinary vowel utterance, but a part also into or through the nose), the result is a vowel with a nasal tinge or tone added to it, or a "nasal vowel." The French, for example, has four nasal vowels, as in *vin, en, on, un*. Whenever such are found in an Indian language, they may best be written with the proper sign for just that vowel-sound which is given, and with the addition of a "superior" *n* to indicate the nasality. Thus, the four French sounds would be represented thus:

<i>vin̄</i>	<i>en̄</i>	<i>on̄</i>	<i>un̄</i> .
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But there are other pairs of surd and sonant sounds (without any nasal correspondents).

Thus, for example, the *f* of *five* and the *v* of *voice* stand related in this way, the *f* being made by an expulsion of pure breath, and the *v* of intoned or sonant breath; through precisely the same position of the mouth-organ. In English, this position is a pressing of the upper teeth upon the lower lip; but some languages leave out the teeth altogether, and produce very nearly the same sounds between the edges of the two lips alone. In any language, it would be well to look sharply to see whether its *f* or *v*, or both, are of the one kind or the other, and the purely labial pair may best be written *ph* and *bh*.

The *th*-sound in our words *thin* and *truth*, and that in *then* and *with*, are related in the same way, one being surd and the other sonant. Although they are simple sounds, we have no simple signs for them; we must write them, the *thin-truth* one with *th*; and then we shall best write the other, the *then-with* one, with *dh*, because it stands in precisely the same relation to the *th*-sound as the *d* does to the *t*.

This class of sounds are best called the "spirants." The *f* and *v* are labial, and the *th* and *dh* are lingual (although each pair brings in an additional organ, the teeth). In English we have no palatal spirants; but they are found in many languages. The German, for example, has two: one in words like *ich* and *nich*, formed further forward on the tongue; the other, in *ach*, *ueh*, etc., further back, more gutturally. By analogy with the *th*-sign we may best write the German *ich*-sound with *kh*; and then, for convenient distinction, we may write the *ueh*-sound with *gh*. They are both surd, and the corresponding sonant is very rare; if met with (nearly the Arabic "ghain"), it would have to be written with *gh*.

The spirants, then, are—

<i>f</i>	<i>v</i>	<i>th</i>	<i>dh</i>	<i>kh</i>	<i>gh</i>
<i>five</i>	<i>voice</i>	<i>thin</i>	<i>then</i>	[<i>ich</i>]	[<i>ueh</i>].

We come now to the class of "sibilants," or hissing letters. Our common English *s* and *z* need no explanation; they, too, are corresponding surd and sonant. But our *sh*-sound is just as much a simple sound as *s*, although we use two letters to write it with; and it, as a surd, has its corresponding sonant in *azure* and *pleasure*, in *fusion* and *adhesion*, and their like. So, if we continue to write *sh*, we must represent its sonant by *zh*; and there is nothing better that we can do.

Thus, the sibilants are—

<i>s</i>	<i>z</i>	<i>sh</i>	<i>zh</i>
<i>sauce</i>	<i>zones</i>	<i>shrewish</i>	<i>azure</i> .

The *ch* and *j* sounds in *church* and *judge* are compound, having for their last part the *sh* and *zh* sounds, with a *t* prefixed to the one and a *d* to the other; the *t* and *d*, however, formed in a somewhat different way from our usual ones—namely, further back in the mouth, and with the flat of the tongue. They may, if met with, be written with *tsh* and *dzh*; or, for brevity's sake, with *ch* and *j*; or even with *c* instead of *ch*; according as the *c* or *ch* may be required for no other uses.

The sounds of our *y* and *w*, as in *you* and *we*, should be written with those letters. The same with an *h*-sound prefixed to them—as in *when* = *hwen* and *how* = *hyw*—should be written as pronounced; that is, *hw* and *hy*. Some hold, to be sure, that these sounds are not *w* and *y* with an *h* prefixed, but rather are the corresponding surds to *w* and *y*; in either case, however, the *hw* and *hy* signs are the best, and unobjectionable.

The precise English *w* is a rather uncommon sound among other languages; the *y* is almost universal. Both, as regards the way in which they are made by the mouth-organs, are only infinitesimally different from *i* (*pique*) and *u* (*rule*).

The *r* is a difficult sound for an English speaker to deal with, because the English *r* is spoken so slightly, or even, in a host of cases (when not immediately followed by a vowel), by most people silenced altogether. Other languages are apt to give it a decidedly stronger, even a trilling or vibrated utterance. How, in any given dialect, the *r* (if present) is pronounced will be a proper subject for a little special description.

In some languages or dialects a sort of imitation of *r* is made by vibrating the uvula instead of the tip of the tongue. If met with, this might, in a wholly conventional way, be signified by *rh*, since this combination is not likely to be wanted for anything else. An *r* that has an *h*-sound pronounced before it should, of course, be written with *hr*.

The *ʁ*-sound is uttered between the tip of the tongue and the roof of the mouth. In an *h*-sound, the tongue touches the roof of the mouth somewhere in the middle, and the breath comes out at the sides of the tongue. The ordinary *h* has the tongue in the *t*-position. The peculiar *ʁ* expressed in Italian by *gl* (as in *moglie*) is made with the flat of the tongue, instead of its tip, against the roof of the mouth, and will be conveniently represented by *br*; it is also nearly the old French *l mouille*. The *ʁ* similarly made (rather palatal than lingual), which is the *ñ* of the Spanish and *gn* of the French (as in *cañon*, *fréquer*), may be written in like manner with *ny*.

We have used the *h* a number of times in making digraphs, or double signs, for writing sounds which do not contain any *h*-element. But the real *h*-sound, though by no means found in all languages, is a common one. It is an expulsion of air through the position of the adjoining sonant sound (usually the following one). Thus, for example, the *h* of *ha* is a momentary rush of surd breath through the organs put in position for *a*, before the tone begins which makes the *a* itself; and it is just so with the *h* of *he* and with that of *who*; they are made respectively with the mouth-organs in the position of *i* (*pique*) and of *u* (*rule*). To be a real *h*, a pure aspiration, the sound must have this character. If there is a narrowing of the throat, anywhere, so as to give a rasping noise, the sound is of another character, a guttural spirant, and must be specially described and differently represented.

In English, we use the aspiration only before a vowel and before the semivowels *w* and *y* (as instanced above by *when* and *hue*). In some other languages it may be found also before *r* and *l* and the nasal mutes *n* and *m*. Again, it may be found following instead of preceding the vowel which gives it its character. There are languages, too, in which strengthened or modified breathings appear which yet are not precisely spirants, and it may be necessary, in order to represent them, to double the *h*, or add a rough-breathing (thus *h^h*, or use other like methods of distinction.

Uses have thus been assigned to all our letters excepting *q* and *z*. As we ordinarily use the *q*, it is only another way of writing a *k*-sound; our *qu* is the equivalent of *kw*; *quit*, for example, would be just as accurately written *kwit*. And the *z* is only a *ks*-or, sometimes, a *gz*-written with a single sign.

Whatever sounds have not been thus provided for must be dealt with by the observer as well as is possible to him. He should be guided by the analogies of the system here laid down, and should, if it may be, select characters or combinations of characters which are to be found in ordinary printing offices.

Not a little difficulty is sometimes occasioned to collectors by the indefinite or undecided character of some of the sounds of a language. A *t* and *d*, for example, will appear to be used interchangeably, the sound in the same word seeming now to be the one and now the other. This is in some cases owing to insufficient familiarity with the language, and the difficulty is removed by more experience; in other cases, it is due to the fact that the speakers do not observe distinctions which we observe, but utter a kind of compromise between two or more different sounds, shading now more toward one and now more toward another. The sounds thus exchanged are in general those made by the same mouth-organs—the corresponding surd and sonant mutes, the corresponding mutes and spirants, the *r* and *l*, and so on. The collector will probably do best to select some one representative for such a sound, pointing out at the same time its permutable character.

It is very desirable always to mark the accented syllable of a word; and it may be best done by an acute accent on or after the vowel (or the syllable, if the word is divided into syllables; as, *fáther*, *des-truc-tion*).

It is well for a collector to divide by hyphens (as in the word last instanced) the syllables of the words in his lists, but this need not be done in connected texts.

It may again be pointed out, in conclusion, that the value of vocabularies and other such matter collected will be proportioned, in no small degree, to the care and skill shown in analyzing and representing the phonetic structure of the languages studied.

ALPHABET.

<i>a</i> or <i>ā</i> , long as in <i>far</i> , <i>father</i> , Gm. <i>haben</i> .	<i>kh</i> as Gm. <i>ch</i> in <i>ich</i> , <i>nitch</i> , <i>kirche</i> .
<i>a</i> or <i>ā</i> , short as in Gm. <i>man</i> , Fr. <i>pus</i> ; nearly as in (E.) <i>what</i> , <i>not</i> .	<i>l</i> as in <i>lull</i> , Gm. <i>tallen</i> , Fr. <i>lie</i> .
<i>a</i> as in <i>hat</i> , <i>man</i> .	<i>ly</i> as It. <i>gl</i> in <i>moglie</i> , (old) French <i>brüier</i> .
<i>ā</i> as in <i>law</i> , <i>far</i> , <i>all</i> .	<i>u</i> as in <i>uum</i> , Gm. <i>nenne</i> , Fr. <i>me</i> .
<i>ā</i> as Fr. <i>en</i> in <i>en</i> , <i>quand</i> .	<i>u</i> as in <i>uu</i> , Gm. <i>noane</i> , Fr. <i>ne</i> .
<i>ā</i> as Fr. <i>in</i> in <i>in</i> , <i>rien</i> , <i>sein</i> .	<i>ñ</i> as <i>ng</i> in <i>singing</i> , Gm. <i>singen</i> .
<i>ā</i> as Fr. <i>on</i> in <i>on</i> , <i>son</i> , <i>rond</i> .	<i>ny</i> as Sp. <i>ñ</i> in <i>cañon</i> , Fr. <i>gn</i> in <i>règne</i> .
<i>ai</i> as in <i>aiste</i> , Gm. <i>mein</i> ; <i>i</i> in (E.) <i>pine</i> , <i>find</i> .	<i>o</i> or <i>ō</i> , long as in <i>note</i> .
<i>āi</i> as <i>oi</i> or <i>oy</i> in <i>oil</i> , <i>boy</i> .	<i>o</i> or <i>ō</i> , short as in (N. E.) <i>home</i> , Gm. <i>soll</i> , Fr. <i>mot</i> .
<i>au</i> as <i>ou</i> or <i>ow</i> in <i>out</i> , <i>hau</i> , Gm. <i>haus</i> .	<i>p</i> as in <i>pipe</i> , Gm. <i>puppe</i> , Fr. <i>poupe</i> .
<i>b</i> as in <i>blab</i> , Gm. <i>beben</i> , Fr. <i>belle</i> .	<i>p'</i> nearly as <i>ph</i> in <i>topography</i> .
<i>b'</i> nearly as <i>bh</i> in <i>cobhouse</i> .	<i>ph</i> as Gm. <i>f</i> in <i>pfen</i> .
<i>bh</i> as Gm. <i>w</i> in <i>schwer</i> , <i>zwei</i> .	<i>qh</i> as Gm. <i>ch</i> in <i>ach</i> , <i>doch</i> , Scottish <i>tach</i> , Sp. <i>j</i> in <i>hijo</i> .
<i>c</i> (or <i>ch</i>) as <i>ch</i> in <i>church</i> , It. <i>cielo</i> .	<i>r</i> as in <i>roaring</i> , Gm. <i>röhren</i> , Fr. <i>rare</i> .
<i>c</i> as in <i>dread</i> , Gm. <i>das</i> , Fr. <i>de</i> .	<i>rh</i> uvular <i>r</i> .
<i>d</i> as <i>th</i> in <i>then</i> , <i>with</i> .	<i>s</i> as in <i>sauce</i> , Fr. <i>sauce</i> , Gm. <i>weisen</i> .
<i>d'</i> nearly as <i>dh</i> in <i>madhouse</i> .	<i>sh</i> as in <i>shua</i> , Gm. <i>schon</i> , Fr. <i>chair</i> .
<i>dh</i> as <i>th</i> in <i>then</i> , <i>with</i> .	<i>t</i> as in <i>trud</i> , Gm. <i>treten</i> , Fr. <i>titier</i> .
<i>e</i> or <i>ē</i> , long as in <i>they</i> , Gm. <i>beet</i> .	<i>t'</i> nearly as <i>th</i> in <i>madhead</i> .
<i>e</i> or <i>ē</i> , short as in <i>then</i> , Gm. <i>belt</i> , Fr. <i>siennce</i> .	<i>th</i> as in <i>thin</i> , <i>truth</i> .
<i>f</i> as in <i>fife</i> , Gm. <i>feuer</i> , Fr. <i>feu</i> .	<i>u</i> or <i>ū</i> , long as in <i>rule</i> , <i>fool</i> , Gm. <i>du</i> , Fr. <i>douz</i> .
<i>g</i> as in <i>gig</i> , Gm. <i>gross</i> , Fr. <i>gros</i> .	<i>u</i> or <i>ū</i> , short as in <i>pull</i> , <i>sonn</i> , Gm. <i>null</i> , Fr. <i>nulle</i> .
<i>g'</i> nearly as <i>gh</i> in <i>loghouse</i> .	<i>ū</i> as in <i>but</i> , <i>run</i> , <i>son</i> , <i>blood</i> .
<i>gh</i> [nearly as Arab. <i>ghain</i>].	<i>ū</i> as Fr. <i>un</i> in <i>un</i> , <i>brun</i> .
<i>h</i> as in <i>ha</i> , <i>he</i> , <i>hoot</i> , etc., Gm. <i>haben</i> .	<i>ü</i> as in Gm. <i>kühl</i> , <i>küssen</i> , Fr. <i>plume</i> .
<i>h'</i> stronger aspiration.	<i>v</i> as in <i>valve</i> , Gm. <i>wenn</i> , Fr. <i>veur</i> .
<i>hw</i> as <i>wh</i> in <i>when</i> .	<i>w</i> as in <i>wish</i> , <i>well</i> , <i>wayward</i> , nearly as Fr. <i>oui</i> .
<i>h^h</i> as in <i>hue</i> .	<i>y</i> as in <i>you</i> , <i>year</i> , Gm. <i>j</i> in <i>ja</i> .
<i>i</i> or <i>ī</i> , long as in <i>pique</i> , Gm. <i>ihn</i> , Fr. <i>île</i> .	<i>yu</i> as <i>u</i> in <i>use</i> , <i>pure</i> , <i>new</i> , <i>feud</i> .
<i>i</i> or <i>ī</i> , short as in Gm. <i>wilf</i> , Fr. <i>ici</i> ; nearly as in (E.) <i>pick</i> , <i>thin</i> .	<i>z</i> as in <i>zones</i> , Gm. <i>hase</i> , Fr. <i>zèle</i> , <i>rose</i> .
<i>j</i> as in <i>judge</i> .	<i>zh</i> as in <i>azure</i> , <i>z</i> in <i>pleasure</i> , <i>fusion</i> , Fr. <i>jüger</i> .
<i>k</i> as in <i>kick</i> , Gm. <i>kamm</i> , Fr. <i>quand</i> .	
<i>k'</i> nearly as <i>kh</i> in <i>inkhorn</i> .	

EXPLANATORY REMARKS.

In the preparation of the following sets of words, phrases, and sentences, with accompanying hints to the collector, three objects have been kept in view: first, to select words which can be obtained with the greatest ease; second, to select words which can be obtained with the greatest certainty; and third, to select words which will be of the greatest linguistic and general ethnographic value. These considerations were sometimes in conflict, but a careful weighing of them has led to the following result.

It should not be supposed that these words and sentences are the only ones of value; the collector may, as opportunity is afforded, increase the list to any desired extent. All the new material added will be not only of value in itself, but will have additional interest because of that which has been done before.

A smaller number than called for in the schedule may be of great value if obtained in sets as given herein; any one of the sets of the words obtained from almost any Indians in North America would be a valuable contribution to linguistics, but words selected at random here and there would be of little or no use.

Care should be taken to obtain words from the Indians themselves. Indians speaking English can be found in almost every tribe within the United States. Words cannot be obtained accurately from white men who are supposed to speak the Indian tongue, unless such persons have been long with the Indians and are intelligent and scholarly, and have had some reasons for studying Indian languages on account of their being missionaries, teachers, or linguists.

The general method of communication between white men and Indians is by a conventional jargon, composed of corrupted Indian and English words, with many words from other European tongues. In this fact is found one of the reasons why words should not be collected from white men unless they have a scholarly knowledge, as indicated above.

To collect words from an Indian requires great patience, as it is difficult to hold his attention for any great length of time, and it requires a constant exercise of ingenuity to devise methods by which he may fully understand what is asked by the collector and that the collector himself may feel that he is working with certainty.

Sometimes an Indian will deceive by giving foolish or vulgar words, considering it a good jest; for this and other reasons, everything collected should be carefully verified.

[illegible]

II.—PARTS OF THE BODY.

In many Indian languages there is no separate word for eye, hand, arm, or other parts and organs of the body, but the word is found with an incorporated or attached pronoun signifying *my* hand, *my* eye; *your* hand, *your* eye; *his* hand, *his* eye, &c., as the case may be. If the Indian, in naming these parts, refers to his own body, he says *my*; if he refers to the body of the person to whom he is speaking, he says *your*, &c. If an Indian should find a detached foot thrown from the amputating-table of an army field-hospital, he would say something like this: I have found somebody *his* foot. The pronominal particle should be written with the part implying the name, the whole forming but one word. It is usually very easy, by inspection, to determine what pronoun is used. This linguistic characteristic is widely spread though not universal.

It is a general custom among the Indians to pierce the ears for ornaments; many tribes also pierce the septum of the nose.

The names of the internal organs or parts can better be determined after having learned the names of parts of animals as subsequently called for. There may be a general term for blood-vessel, and specific terms for the more noticeable ones.

ENGLISH.	REMARKS.
Head.....	
Hair.....	
Crown of the head.....	
Scalp.....	
Face.....	
Forehead.....	
Eye.....	
Pupil of the eye.....	
Eyelash.....	
Eyebrow.....	
Upper eyelid.....	
Lower eyelid.....	
Ear-lobe.....	
Ear.....	
Perforation in ear.....	
External opening of the ear.....	
Nose.....	
Ridge of nose.....	
Nostril.....	
Septum of nose.....	
Perforation of septum of nose.....	
Cheek.....	
Beard.....	
Mouth.....	
Upper lip.....	
Lower lip.....	
Tooth.....	
Tongue.....	

PARTS OF THE BODY—Continued.

ENGLISH.		REMARKS.
Sadiva		
Palate		
Throat		
Chin		
Neck		
Adam's apple		
Body		
Shoulder		
Shoulder-blade		
Breast of a man		
Breast of a woman, (mamma)		
Nipples		
Hip		
Belly		
Navel		
Right arm		
Left arm		
Arm-pits		
Right arm above elbow		
Left arm above elbow		
Right elbow		
Left elbow		
Right arm below elbow		
Left arm below elbow		
Right wrist		
Left wrist		
Right hand		
Left hand		
Palm of hand		
Back of hand		
Fingers		
Thumb		
First finger		

PARTS OF THE BODY—Continued.

ENGLISH.	REMARKS.
Second finger	
Third finger	
Small finger	
Finger-nail	
Knuckle	
Space between knuckles	
Rump	
Leg	
Leg above knee	
Knee	
Knee-pan	
Leg below knee	
Calf of the leg	
Ankle	
Ankle-bone	
Instep	
Foot	
Sole of foot	
Heel	
Toe	
Large toe	
Second toe	
Third toe	
Fourth toe	
Toe-nail	
Blood	
Vein or artery	
Brain	
Bladder	
Caul	
Gall	
Heart	
Kidney	

III.—RELATIONSHIPS.

The Indians are very exact in designating the degree and nature of relationships by special terms; thus they have a word signifying elder brother; another, younger brother; one signifying elder sister; another, younger sister. They have no word for cousin in general, but perhaps a word signifying my father's elder brother's son; another, my father's younger brother's son; another, my mother's elder brother's son; still another, my mother's elder sister's son; and perhaps another, my mother's younger sister's son, etc., etc. The set of terms used by any tribe of Indians for this purpose will constitute a valuable contribution to ethnology.

The terms can with a little care be obtained with accuracy. The following method for drawing out these words from the Indians has been used with success.

Relationships arising from the first and second generations.

Take two bundles of sticks, all the sticks in one bundle being alike, but quite distinct from those in the other; two boxes of different kinds of matches will do. Use one set for males and the other for females. Place on a blanket, table, or ground, as the case may be, a stick representing a male person; say to the Indian that it represents a man; place beside it a stick from the bundle representing female persons, and say to the Indian that this represents a woman, his wife; then ask him what the male person calls the female—that is, what is the word for *wife*? and record it in the schedule below, opposite "wife said by husband"; then ask what the woman calls the man—that is, what is the word for *husband*? and record it opposite "husband said by wife." Place at the foot of the two sticks, *i. e.*, in another rank, a third, from the bundle representing male persons, and say this man and woman have a son; what does the father, pointing to it, call the son? pointing to the proper stick; record the word in the appropriate place in the schedule; then reciprocally, what does the son call the father? again, what does the mother call the son? and what does the son call the mother? Place another stick by the side of the last from the bundle representing female persons, and what the father calls the daughter; the daughter the father; the mother the daughter; the daughter the mother, and record them; what the brother who is older, calls the sister who is younger, and place the result opposite the term "sister said by elder brother," and then what the sister calls the brother, and place it opposite "elder brother said by sister." Take another stick from the bundle representing male persons and place it by the last two, explaining to the Indian that this represents a third child, a male, younger than the other two. To verify the names obtained for father and son, mother and son, repeat the questions asked concerning the elder son. Then ask what does the elder brother call the younger brother? and record it; then, what does the younger brother call the elder brother? and record it; then, what does the elder sister call the younger sister? and record it; then, what does the younger sister call the elder sister? and record it. Now take a stick from the bundle representing the female persons, explaining that this represents a fourth child—a younger daughter and sister. Verify as far as possible the terms heretofore obtained, and then ask what does the elder sister call the younger sister? and record it; what does the younger sister call the elder sister? and record it.

It may be well to add one more son and daughter for verification.

Unless the Indian is very patient, probably the work laid out is sufficient for one sitting.

Now provide two more bundles of sticks—one representing males, the other females, and both unlike those already used; these will represent persons marrying into the family, and are only to be used for such persons.

Having still before the Indians the sticks representing persons, laid out in the order above described, from the new bundle representing female persons place a stick beside the elder brother, and explain that it represents the elder brother's wife, and verify the words heretofore obtained for husband and wife; then, what does the husband's father call the wife? what does the wife call the husband's father? what does the husband's mother call the wife? what does the wife call the husband's mother? Now place a stick from the new bundle representing male persons beside the elder sister, explaining that it represents her husband. Verify the terms for husband and wife. What does the father call his elder daughter's husband? what does the elder daughter's husband call the father? what does the mother call the elder daughter's husband? what does the elder daughter's husband call the mother? In like manner give a wife to the younger son, and a husband to the younger daughter, and obtain the terms called for in the schedule. We will thus have a complete schedule used to denote father, mother, son, daughter, brother, sister, father-in-law, mother-in-law, son-in-law, daughter-in-law, brother-in-law, sister-in-law.

Relationships arising from the third generation.

Now take a stick from the first bundle representing male persons and place it beneath the eldest son and his wife, *i. e.*, in a third rank, saying to the Indian that it represents their first son, and find what the grandfather calls his grandson; the grandson the grandfather; the grandmother the grandson; the grandson the grandmother. Place a stick from the first bundle representing female persons in the same rank with the last and explain that this is the eldest daughter; ascertain what the grandfather call his son's daughter; what the son's daughter calls the grandfather; the grandmother her son's daughter; the son's daughter her grandmother. To each of the other couples of the second generation give a son and daughter; verify the words for grandfather and grandmother, &c., as far as may be desirable.

Then obtain terms for uncle, aunt, nephew, and niece, as called for in the schedule below.

In like manner obtain terms for cousins, cousin's wives, and cousin's husbands, as called for in the schedule.

Relationships arising from the fourth generation.

Now commence with the fourth generation, and obtain as many terms as possible, following the methods and rules above adopted. Extend the investigation as far as possible, not being limited by the terms called for in the schedule. Then obtain, by like methods, the term for step-father, step-mother, step-son, step-daughter, step-brother, step-sister.

REMARKS.

It will be observed in the description above that the eldest male speaks first, and that the person to whom he is speaking always follows, so that the reciprocal relationship appears in juxtaposition in the schedule. Sometimes this reciprocal relationship will be expressed by the use of a common term—as for example the grandfather calls the grandson by the same term as the grandson calls the grandfather, but the former may use a diminutive form of the word.

Distinct words for all the relationships mentioned in the schedule will not be found, but care should be taken to fill out all the blanks so that the method of kinship grouping or classification of relatives may be accurately determined. If the schedule is faithfully followed all the important facts will be discovered.

It will be observed that the words called for always signify *my* relative, as *my* father, *my* son, *my* brother, &c. In most languages the pronoun "*my*" will be an incorporated particle; in a few it will not.

The method of using sticks for symbolizing persons as described above is in harmony with Indian habits of thought. They use among themselves many similar symbolic methods, and an intelligent Indian will easily follow the collector through all the mazes of relationship if the collector himself is always clear and methodic in his plan of presentation. For this reason he should become thorough master of the subject himself before talking with the Indians.

Relationships arising from the first and second generations.

ENGLISH.		REMARKS.
Wife, said by husband		
Husband, said by wife.....		
Son, said by father.....		
Father, said by son.....		
Son, said by mother.....		
Mother, said by son		
Daughter, said by father.....		
Father, said by daughter.....		
Daughter, said by mother		
Mother, said by daughter.....		
Younger sister, said by elder brother.....		
Elder brother, said by younger sister.....		
Younger brother, said by elder brother.....		
Elder brother, said by younger brother.....		
Younger brother, said by elder sister.....		
Elder sister, said by younger brother.....		
Younger sister, said by elder sister		
Elder sister, said by younger sister.....		
Elder son's wife, said by father.....		
Husband's father, said by wife		
Elder son's wife, said by mother.....		
Husband's mother, said by wife.....		
Elder daughter's husband, said by father.....		
Wife's father, said by husband.....		
Elder daughter's husband, said by mother.....		
Wife's mother, said by husband.....		
Younger son's wife, said by father.....		
Husband's father, said by wife		
Younger son's wife, said by mother.....		
Husband's mother, said by wife.....		
Younger daughter's husband, said by father.....		
Wife's father, said by husband.....		
Younger daughter's husband, said by mother.....		

Relationships arising from the third generation.

ENGLISH.		REMARKS.
Elder son's son, said by grandfather.....		
Grandfather, said by elder son's son		
Elder son's daughter, said by grandfather		
Grandfather, said by elder son's daughter		
Elder son's son, said by grandmother		
Grandmother, said by elder son's son		
Elder son's daughter, said by grandmother		
Grandmother, said by elder son's daughter		
Elder daughter's son, said by grandfather		
Grandfather, said by elder daughter's son		
Elder daughter's daughter, said by grandfather		
Grandfather, said by elder daughter's daughter		
Elder daughter's son, said by grandmother		
Grandmother, said by elder daughter's son		
Elder daughter's daughter, said by grandmother		
Grandmother, said by elder daughter's daughter		
Younger son's son, said by grandfather		
Grandfather, said by younger son's son		
Younger son's daughter, said by grandfather		
Grandfather, said by younger son's daughter		
Younger son's son, said by grandmother		
Grandmother, said by younger son's son		
Younger son's daughter, said by grandmother		
Grandmother, said by younger son's daughter		
Younger daughter's son, said by grandfather		
Grandfather, said by younger daughter's son		
Younger daughter's daughter, said by grandfather		
Grandfather, said by younger daughter's daughter		
Younger daughter's son, said by grandmother		
Grandmother, said by younger daughter's son		
Younger daughter's daughter, said by grandmother		
Grandmother, said by younger daughter's daughter		
Younger sister's son, said by uncle		

Relationships arising from the third generation—Continued.

ENGLISH.	REMARKS.
Mother's elder brother, said by nephew	
Younger sister's daughter, said by uncle	
Mother's elder brother, said by niece	
Younger brother's son, said by uncle	
Father's elder brother, said by nephew	
Younger brother's daughter, said by uncle	
Father's elder brother, said by niece	
Elder brother's son, said by aunt	
Father's younger sister, said by nephew	
Elder brother's daughter, said by aunt	
Father's younger sister, said by niece	
Younger brother's son, said by aunt	
Father's elder sister, said by nephew	
Younger brother's daughter, said by aunt	
Father's elder sister, said by niece	
Younger sister's son, said by aunt	
Mother's elder sister, said by nephew	
Younger sister's daughter, said by aunt	
Mother's elder sister, said by niece	
Elder brother's son, said by uncle	
Father's younger brother, said by nephew	
Elder brother's daughter, said by uncle	
Father's younger brother, said by niece	
Elder sister's son, said by uncle	
Mother's younger brother, said by nephew	
Elder sister's daughter, said by uncle	
Mother's younger brother, said by niece	
Elder sister's son, said by aunt	
Mother's younger sister, said by nephew	
Elder sister's daughter, said by aunt	
Mother's younger sister, said by niece	
Husband's younger sister's son, said by aunt	
Mother's elder brother's wife, said by nephew	

Relationships arising from the third generation—Continued.

ENGLISH.	REMARKS.
Husband's younger sister's daughter, said by aunt.	
Mother's elder brother's wife, said by niece.	
Husband's younger brother's son, said by aunt.	
Father's elder brother's wife, said by nephew.	
Husband's younger brother's daughter, said by aunt.	
Father's elder brother's wife, said by niece.	
Wife's elder brother's son, said by uncle.	
Father's younger sister's husband, said by nephew.	
Wife's elder brother's daughter, said by uncle.	
Father's younger sister's husband, said by niece.	
Wife's younger brother's son, said by uncle.	
Father's elder sister's husband, said by nephew.	
Wife's younger brother's daughter, said by uncle.	
Father's elder sister's husband, said by niece.	
Wife's younger sister's son, said by uncle.	
Mother's elder sister's husband, said by nephew.	
Wife's younger sister's daughter, said by uncle.	
Mother's elder sister's husband, said by niece.	
Husband's elder brother's son, said by aunt.	
Father's younger brother's wife, said by nephew.	
Husband's elder brother's daughter, said by aunt.	
Father's younger brother's wife, said by niece.	
Husband's elder sister's son, said by aunt.	
Mother's younger brother's wife, said by nephew.	
Husband's elder sister's daughter, said by aunt.	
Mother's younger brother's wife, said by niece.	
Wife's elder sister's son, said by uncle.	
Mother's younger sister's husband, said by nephew.	
Wife's elder sister's daughter, said by uncle.	
Mother's younger sister's husband, said by niece.	
Father's younger sister's son, said by male cousin.	
Mother's elder brother's son, said by male cousin.	
Father's younger sister's daughter, said by male cousin.	

Relationships arising from the third generation—Continued.

ENGLISH.	REMARKS.
Mother's elder brother's son, said by female cousin.	
Father's younger brother's son, said by male cousin.	
Father's elder brother's son, said by male cousin.	
Father's younger brother's daughter, said by male cousin.	
Father's elder brother's son, said by female cousin.	
Father's younger sister's son, said by female cousin.	
Mother's elder brother's daughter, said by male cousin.	
Father's younger sister's daughter, said by female cousin.	
Mother's elder brother's daughter, said by female cousin.	
Father's younger brother's son, said by female cousin.	
Father's elder brother's daughter, said by male cousin.	
Father's younger brother's daughter, said by female cousin.	
Father's elder brother's daughter, said by female cousin.	
Mother's younger brother's son, said by male cousin.	
Father's elder sister's son, said by male cousin.	
Mother's younger brother's daughter, said by male cousin.	
Father's elder sister's son, said by female cousin.	
Mother's younger brother's son, said by female cousin.	
Father's elder sister's daughter, said by male cousin.	
Mother's younger brother's daughter, said by female cousin.	
Father's elder sister's daughter, said by female cousin.	
Mother's younger sister's son, said by male cousin.	
Mother's elder sister's son, said by male cousin.	
Mother's younger sister's daughter, said by male cousin.	
Mother's elder sister's son, said by female cousin.	
Mother's younger sister's son, said by female cousin.	
Mother's elder sister's daughter, said by male cousin.	
Mother's younger sister's daughter, said by female cousin.	
Mother's elder sister's daughter, said by female cousin.	
Father's younger sister's son's wife, said by male cousin-in-law.	
Husband's mother's elder brother's son, said by female cousin-in-law.	
Father's younger sister's daughter's husband, said by male cousin-in-law.	
Wife's mother's elder brother's son, said by male cousin-in-law.	

Relationships arising from the third generation—Continued.

ENGLISH.		REMARKS.
Father's younger brother's son's wife, said by male cousin-in-law.		
Husband's father's elder brother's son, said by female cousin-in-law.		
Father's younger brother's daughter's husband, said by male cousin-in-law.		
Wife's father's elder brother's son, said by male cousin-in-law.		
Husband's father's younger sister's son, said by female cousin-in-law.		
Mother's elder brother's son's wife, said by male cousin-in-law.		
Husband's father's younger sister's son's wife, said by female cousin-in-law.		
Husband's mother's elder brother's son's wife, said by female cousin-in-law.		
Husband's father's younger sister's daughter, said by female cousin-in-law.		
Mother's elder brother's son's wife, said by female cousin-in-law.		
Husband's father's younger sister's daughter's husband, said by female cousin-in-law.		
Wife's mother's elder brother's son's wife, said by male cousin-in-law.		
Husband's father's younger brother's son, said by female cousin-in-law.		
Father's elder brother's son's wife, said by male cousin-in-law.		
Husband's father's younger brother's son's wife, said by female cousin-in-law.		
Husband's father's elder brother's son's wife, said by female cousin-in-law.		
Husband's father's younger brother's daughter, said by female cousin-in-law.		
Father's elder brother's son's wife, said by female cousin-in-law.		
Husband's father's younger brother's daughter's husband, said by female cousin-in-law.		
Wife's father's elder brother's son's wife, said by male cousin-in-law.		
Father's younger sister's son's wife, said by female cousin-in-law.		
Husband's mother's elder brother's daughter, said by female cousin-in-law.		
Father's younger sister's daughter's husband, said by female cousin-in-law.		
Husband's mother's elder brother's daughter, said by male cousin-in-law.		
Father's younger brother's son's wife, said by female cousin-in-law.		
Husband's father's elder brother's daughter, said by female cousin-in-law.		
Father's younger brother's daughter's husband, said by female cousin-in-law.		
Wife's father's elder brother's daughter, said by male cousin-in-law.		
Wife's father's younger sister's son's wife, said by male cousin-in-law.		
Husband's mother's elder brother's daughter's husband, said by female cousin-in-law.		
Wife's father's younger sister's daughter's husband, said by male cousin-in-law.		
Wife's mother's elder brother's daughter's husband, said by male cousin-in-law.		
Wife's father's younger brother's son's wife, said by male cousin-in-law.		

Relationships arising from the third generation—Continued.

ENGLISH.	REMARKS.
Husband's father's elder brother's daughter's husband, said by female cousin-in-law.	
Wife's father's younger brother's daughter's husband, said by male cousin-in-law.	
Wife's father's elder brother's daughter's husband, said by male cousin-in-law.	
Mother's younger brother's son's wife, said by male cousin-in-law.	
Husband's father's elder sister's son, said by female cousin-in-law.	
Mother's younger brother's daughter's husband, said by male cousin-in-law.	
Wife's father's elder sister's son, said by male cousin-in-law.	
Mother's younger sister's son's wife, said by male cousin-in-law.	
Husband's mother's elder sister's son, said by female cousin-in-law.	
Mother's younger sister's daughter's husband, said by male cousin-in-law.	
Wife's mother's elder sister's son, said by male cousin-in-law.	
Husband's mother's younger brother's son's wife, said by female cousin-in-law.	
Husband's father's elder sister's son's wife, said by female cousin-in-law.	
Husband's mother's younger brother's daughter's husband, said by female cousin-in-law.	
Wife's father's elder sister's son's wife, said by male cousin-in-law.	
Husband's mother's younger sister's son's wife, said by female cousin-in-law.	
Husband's mother's elder sister's son's wife, said by female cousin-in-law.	
Husband's younger sister's daughter's husband, said by female cousin-in-law.	
Wife's mother's elder sister's son's wife, said by male cousin-in-law.	
Wife's father's younger sister's son, said by male cousin-in-law.	
Mother's elder brother's daughter's husband, said by male cousin-in-law.	
Wife's father's younger sister's daughter, said by male cousin-in-law.	
Mother's elder brother's sister's husband, said by female cousin-in-law.	
Wife's father's younger brother's son, said by male cousin-in-law.	
Father's elder brother's daughter's husband, said by male cousin-in-law.	
Wife's father's younger brother's daughter, said by male cousin-in-law.	
Father's elder brother's daughter's husband, said by female cousin-in-law.	
Husband's mother's younger brother's son, said by female cousin-in-law.	
Father's elder sister's son's wife, said by male cousin-in-law.	
Husband's mother's younger brother's daughter, said by female cousin-in-law.	
Father's elder sister's son's wife, said by female cousin-in-law.	
Husband's mother's younger sister's son, said by female cousin-in-law.	
Mother's elder sister's son's wife, said by male cousin-in-law.	

Relationships arising from the fourth generation.

ENGLISH.		REMARKS.
Great grandson, said by great grandfather		
Great grandfather, said by great grandson		
Great grandson, said by great grandmother		
Great grandmother, said by great grandson		
Great granddaughter, said by great grandfather		
Great grandfather, said by great granddaughter		
Great granddaughter, said by great grandmother		
Great grandmother, said by great granddaughter		
Grand-nephew, said by grand-uncle		
Grand-uncle, said by grand-nephew		
Grand-nephew, said by grand-aunt		
Grand-aunt, said by grand-nephew		
Grand-niece, said by grand-uncle		
Grand-uncle, said by grand-niece		
Grand-niece, said by grand-aunt		
Grand-aunt, said by grand-niece		
.....		
.....		
.....		
.....		
Step-son, said by step-father		
Step-father, said by step-son		
Step-son, said by step-mother		
Step-mother, said by step-son		
Step-daughter, said by step-father		
Step-father, said by step-daughter		
Step-daughter, said by step-mother		
Step-mother, said by step-daughter		
.....		
.....		
.....		
.....		

In some Indian languages there are certain words used for the names of children, given them in the order of their birth, so that the child's name indicates the order of its birth. There are two sets of these words, one set being given to males, the other to females; thus, if the first born is a boy, he takes his name from the male set; if a girl, her name from the female set; these words will therefore have the signification of first born, second born, third born, etc., **though** the numerals may not enter into their composition. There may be variations of this plan.

If such a system is not found, erase "is named" from the schedule and obtain the equivalent of the phrase thus changed.

ENGLISH.	REMARKS.
The first born child (if male) is named	
The first born child (if female) is named	
The second born child (if male) is named	
The second born child (if female) is named	
The third born child (if male) is named	
The third born child (if female) is named	
The fourth born child (if male) is named	
The fourth born child (if female) is named	
The fifth born child (if male) is named	
The fifth born child (if female) is named	
The sixth born child (if male) is named	
The sixth born child (if female) is named	
The seventh born child (if male) is named	
The seventh born child (if female) is named	
Male orphan, father dead	
Male orphan, mother dead	
Male orphan, father and mother dead	
Female orphan, father dead	
Female orphan, mother dead	
Female orphan, father and mother dead	
Father whose children have all died	
Mother whose children have all died	
Son born after the death of father	
Daughter born after the death of father	
Still-born male child	
Still-born female child	
.....	
.....	

V.—GOVERNMENTAL ORGANIZATION.

Usually a small number of persons are organized under one chief, and claim some small tract of ground as their home, and frequently take the name of such country; as the Kaf-bab-lits, living on the Kaf-bab, a great plateau of northern Arizona. This is the unit of governmental organization, and is by some authors called a tribe, by others a band, and by still others a chieftaincy. Let us call it a chieftaincy.

While the proper name of the chieftaincy is the name of the country which it inhabits, and is the title-deed to its home, many soubriquets are used, as we call an Illinoisian a "sucker," or an Ohioan a "buckeye;" thus soubriquets are given indicating peculiarities of the people, and often relating to their food, as dog eaters, acorn eaters, fish eaters, &c. Sometimes other peculiarities are indicated, as white knives, red knives, &c. The range of these terms is often very indefinite; the people of many chieftaincies may be known as "fish eaters," or as "white knives;" again a chieftaincy or large group of people may have a soubriquet given them by tribes on one side, and another given them by tribes elsewhere. Usually the names by which the Indians have been known to the white men are corrupted soubriquets. Much difficulty will usually be found in obtaining the true or *land-name* of the chieftaincy from the fear that it may be used to the disadvantage of the people through methods of sorcery. Where the Indians have been driven away from their ancient homes and this organization broken up, these names rapidly become obsolete; but they should be obtained when possible. The names by which they designate other chieftaincies should also be noted. The chieftaincy as above described is the unit of governmental organization.

Two or more chieftaincies speaking the same language or slightly varying dialects are often organized in one body—sometimes called a confederacy, sometimes a tribe. Let us call it a confederacy. Often two or more such confederacies are temporarily, or more permanently, united in a grand alliance, called by some authors a confederacy, by others a nation, and by still others a league. Let us call it a league. Such a league may be composed of people speaking different languages. In some of the greater confederacies, or leagues of long standing, the organization by chieftaincies appears to have been lost; at any rate this seems to be the case with the league of the Iroquois; but traces of the chieftaincy organization remain in the great league of the Dakotas. The boundary-line between confederacy and league cannot be definitely drawn.

It has frequently been found impossible to obtain the common name for the chieftaincy, confederacy, or league; on the other hand, the common names are sometimes readily found, while the proper names are not easily discovered.

The proper name of a league is often a word directly signifying or symbolizing "banded together," and thus the proper and common name may be one and the same. The remarks above concerning the soubriquets of chieftaincies apply with still greater force to confederacies and leagues, and a multiplicity of such terms may be found among the surrounding tribes, and all recognized by the tribe to which they are applied.

Indian people usually have a word signifying "one of us," and in the schedule below the term *Indian* is given as its nearest synonym. The term is used to distinguish the Indians from the tribes of animals and mythological persons recognized by them. Another is used to designate *whitemen*. Among the southwestern tribes two such terms are used, one denoting those who came from the south, chiefly Spaniards; the other denoting those who came from the east.

ENGLISH.	REMARKS.
Chieftaincy (common noun)	
Name of chieftaincy	
Confederacy (common noun)	
Name of confederacy	
Chief of confederacy (common noun)	
Name of chief of confederacy	
Council	
Council chamber (sometimes built under ground, and called sweat-house.)	
Council chief (common noun)	
Name of council chief	
War chief (common noun)	
Name of war chief	
Friend (one of the gens)	
Friend (one not of the gens)	
Enemy (one of the gens)	
Enemy (one not of the gens)	
Slave	
Indian	
Whiteman (from the east)	
Spaniard (whiteman from the south)	

VI.—RELIGION.

Some of the Indians have nature-gods, *i. e.* a god of the east, a god of the west, a god of the north, and a god of the south; a god of rain, a god of thunder, the sun, moon, stars, &c. As stated elsewhere, the greater number of their gods are animals—the progenitors or prototypes of the present species. They also have daemon gods, *i. e.* the gods or presiding spirits of rivers, lakes, springs, mountains, corn, beans, &c. Many hero-gods are worshipped—wonderful people of the long ago. The names of all such gods should be discovered and recorded when possible.

On inquiring of the Indians about their gods the term "god" should not be used, for by this they understand the God of the white man. Their generic or class-name for god is often a term signifying "the ancients"—those who lived long ago, or some equivalent expression. Inquire then for wonderful ancient people, wonderful ancient animals; the first people, the first animals. The student of Indian languages can do royal service to ethnology by stopping now and then in his linguistic work to record the interesting stories which the more intelligent Indians may be induced to relate concerning the wonderful personages of their mythology. Nor should these stories be neglected because of their simplicity, inconsistency, or vulgarity.

Indian dances are generally of a religious character, and, with their names, a brief description should be given. A blank is left below for the names of gods, dances, songs, &c.

[illegible]

VIII.—DRESS AND ORNAMENTS.

ENGLISH.		REMARKS.
Hat (any covering for the head).....		
Hat (woman's).....		
Head-dress of feathers.....		
Mask.....		
Necklace of bone.....		
Necklace of bird-bills.....		
Necklace of bird-claws.....		
Necklace of bears' claws.....		
Necklace of shells.....		
Toga or skin shirt.....		
Long gown (extending from shoulder to ankles).....		
Short gown (extending from waist to knees).....		
Apron of skin.....		
Belt of skin.....		
Loin cloth, or breech clout, of skin.....		
Leggings of skin (man).....		
Moccasins.....		
Blanket.....		
Robe of bear skin.....		
Robe of buffalo skin.....		
Robe of deer skin.....		
Robe of rabbit skins.....		
Robe of wild-cat skins.....		
Fringe of skin.....		
Paint, black.....		
Paint, red.....		
Paint, yellow.....		
Tattoo marks.....		
Buckskin.....		
Antelope skin.....		
Sheep skin.....		
Elk skin.....		
Rabbit skin.....		

IX.—DWELLINGS.

Very many tribes have two kinds of dwellings, permanent and temporary. That is, besides the homes which they occupy the greater part of the year, they build temporary lodging-places when they are hunting, fishing, etc. A description of both classes of dwellings should be given.

The Pueblos people and many other tribes have large communal houses, either of wood or stone, which are divided into compartments. In some of these houses the divisions are very complete, while in others they are but imperfectly indicated. The way in which these divisions are made and the rules for assigning the occupants to them should be discovered and given. There may be specific names for the different compartments; if so, insert them in the blank below; also the names of any other parts of the house.

In all dwellings, communal or family, the Indians are punctilious in assigning places to the regular occupants and to visitors. Their rules for such occupancy are important.

The assembly chamber has often been called a sweat-house. Sometimes the same structure is used for both purposes, but usually two different structures are used. Among the Pueblos and many other tribes the assembly chamber and sweat-house are under ground. The women construct menstrual lodges; these are rude shelters, apart from the other dwellings, and should be described and their names recorded.

ENGLISH.	REMARKS.
Earth lodge	
Brush lodge	
Tule lodge	
Pole lodge	
Slab lodge	
Skin lodge	
Menstrual lodge	
Lodge-pole	
Lodge-pin	
Doorway (of lodge)	
Doorflap (of lodge)	
Smoke-hole	
Mat (for lodge)	
Bed	
Fire	
Blaze	
Living coals	
Dead coals	
Ashes	
Smoke	
Soot	
Fire-place	
Fire-wood	
Poker	
Communal house	
Room	
.....	
.....	
.....	

X.—IMPLEMENTS AND UTENSILS.

ENGLISH.		REMARKS.
Bow of wood		
Bow of horn		
Bow-string		
Sinew on back of bow		
Arrow		
Notch in end of arrow for bow-string		
Notch in end of arrow for arrow-head		
Arrow-head of stone		
Arrow-head chipper (made of horn)		
Point of arrow-head		
Arrow-shaft of reed		
Arrow-shaft of wood		
Groove in arrow-shaft		
Arrow-shaft straightener (made of horn)		
Arrow-shaft polisher (made of stone)		
Cement used in fastening arrow-heads		
Arrow feathers		
Quiver		
Quiver-strap		
Wrist-guard		
War-club		
War-spear		
Fish-spear		
Shield		
Sling		
Canoe		
Canteen made of a bladder		
Drum		
Fish-line		
Fish-net		
Fish-hook		
Net for catching rabbits		
Net for catching fish		

IMPLEMENTS, ETC.—*Basket-ware.*

ENGLISH.		REMARKS.
Large conical seed-basket (carried on back).....		
Hand seed-basket		
Seed-fan (for beating seed into a basket).....		
Winnowing basket.....		
Flour-tray (basket-ware)		
Bread-tray (basket-ware).....		
Berry-basket		
Trinket-basket.....		
Fish-basket		
Fishing-basket (dip-net of basket-ware).....		
Large water-jug (for holding water in lodge).....		
Large water-jug (of basket-ware covered with pitch).		
Large water-bottle (for holding water in lodge).....		
Large water-bottle (of basket-ware covered with pitch).		
Small pilgrim bottle (of basket-ware covered with pitch).		

IMPLEMENTS, ETC.—Pottery.

ENGLISH.		REMARKS.
Large water-jug (for holding water in lodge)		
Large water-bottle (for carrying water on back)		
Pilgrim bottle		
Grease-jar		
Meal-jar (round)		
Meal-jar (square)		
Large bowl		
Small bowl		
Tray		
Cup		
Ladle		

XIII.—ANIMALS.

Zoötheism largely prevails among North American Indians—that is, many of their gods are animals; not the present race of animals, but the progenitors or prototypes of the present species. In the study of North American mythology it is very desirable that we know the names used by the Indians for the animals with which they are acquainted. It is manifest that from any one tribe but few of the names in the list can be collected for the reason that it includes many species restricted to limited geographic areas. The list should be considered simply as suggestive and should be increased—the collector adding the names of all the animals known to the tribe studied.

Sometimes the name for the ancient animal (or animal god) has a different termination or is denoted by some other slight change in the word; where this is the case the animal name used for the name of a person is the same as the name of the animal god, rather than the name of the existing species.

The method of distinguishing sex should also be noted, which is generally by the use of words signifying *male* and *female*; also note the name of the young of each species. It is a mistake to suppose that the Indians have no class-names or generic terms; such terms are very common among them, but their methods of classification do not agree with those used by civilized people—that is, their generic terms embrace categories easily recognized by a savage people, but different from those recognized by a civilized people. Thus a class-name may be found to embrace those animals which live in trees, as raccoons, porcupines, squirrels, &c.; another, those which burrow, as badgers, prairie-dogs, &c.; and still another, those which roam over the plains, as buffaloes, deer, antelope, &c.

All animate and inanimate objects are thrown into classes, among the several tribes, in diverse and curious ways. Not only do the Indians have many class-names, but class distinctions are curiously woven into the grammatical structure of their languages. An Indian system of classifying natural objects is a very interesting subject for study.

Mammals.

ENGLISH.	REMARKS.
Armadillo.....	
Antelope.....	
Buffalo.....	
Bison.....	
Bison, wood.....	
Beaver.....	
Badger.....	
Bear, grizzly.....	
Bear, cinnamon.....	
Bear, black.....	
Caribou (woodland).....	
Caribou (barren ground).....	
Chipmunk.....	
Cat, wild.....	
Cat, tiger.....	
Cat, civet.....	
Cat, black.....	
Dog.....	
Deer.....	
Deer, mule.....	
Deer, white-tailed.....	
Deer, black.....	
Elk.....	
Ermine.....	

ANIMALS. *Mammals*—Continued.

ENGLISH.		REMARKS.
Fox (yellow)		
Fox (small, dark)		
Fox (red)		
Fox (gray)		
Fox (cross)		
Fox (silver)		
Fox (black)		
Fox (kit)		
Fisher		
Gopher		
Gopher, pocket		
Goat, mountain		
Ground-hog		
Jaguar		
Lynx		
Lemming		
Lion, mountain		
Mouse (stone)		
Mouse (tuft-tailed)		
Mouse (jumping)		
Mouse (house)		
Mouse (wood)		
Mouse (white-footed)		
Mouse (field)		
Mouse (meadow)		
Mouse (prairie)		
Mole		
Martin		
Marmot		
Moose		
Muskrat		
Otter		
Otter, sea		

ANIMALS. *Mammals*—Continued.

ENGLISH.	REMARKS.
Opossum	
Ox, musk	
Panther	
Prairie-dog	
Porcupine	
Peccary	
Rat (common)	
Rat (black)	
Rat (bush)	
Rat (Kangaroo)	
Rat (mountain)	
Rabbit (white)	
Rabbit (gray)	
Rabbit (jackass)	
Rabbit (mule)	
Rabbit (small)	
Rabbit (little chief or cony)	
Raccoon	
Sable	
Skunk	
Sheep, mountain	
Squirrel (gray)	
Squirrel (black)	
Squirrel (ground)	
Squirrel (red)	
Squirrel (flying)	
Wolf	
Wolf (white)	
Wolf (gray)	
Wolf (dusky)	
Wolf (prairie, coyote)	
Weasel	
Wolverine	

ANIMALS.—*Parts of the body, &c., of mammals.*

Having obtained the names of mammals, the student should proceed to obtain parts and organs of the body, and the following suggestion is made in the hope it may prove useful. Make a present of a beef or mutton to the Indians. You will thus secure their goodwill and obtain much assistance in your work, and at the same time you can make it a special occasion for collecting that very interesting class of words relating to the parts and organs of the body. Care should be taken that the animal is dissected slowly, and, as the parts are given out, obtain the words called for and such others as may be convenient.

The words can afterward be verified by killing a rabbit, squirrel, or other animal.

ENGLISH.	REMARKS.
Antlers.....	
Anus	
Bone	
Brain	
Claw	
Dung	
Entrails	
Fat	
Gullet	
Hoot	
Hide	
Horn	
Hair	
Heart	
Intestines.....	
Joint	
Lungs	
Liver	
Muscle	
Meat	
Midriff	
Milk	
Penis	
Rib	
Ribs' hump	
Skull	
Stomach	
Spleen	
Sweetbread	
Skin	

ANIMALS.—*Birds.*

ENGLISH.	REMARKS.
Albatross	
Avocet	
Auk	
Bittern	
Bluebird	
Bluejay	
Butcher-bird	
Blackbird	
Blackbird (red-winged)	
Blackbird (white-winged)	
Blackbird (yellow-head)	
Blackbird (crow)	
Bunting	
Bunting (towhee)	
Bunting (snow)	
Bobolink	
Bullbat	
Bobwhite	
Chicadee	
Creepers	
Catbird	
Cedar-bird	
Cherry-bird	
Crossbill	
Cowbird	
Crow	
Crow (carrion)	
Cock of the plains	
Curlew	
Crane (white or whooping)	
Crane (brown or roundbill)	
Coot	
Cormorant	

ENGLISH.	REMARKS.
Chaparral cock.....	
Cuckoo.....	
Cuckoo (ground).....	
Dipper.....	
Dove.....	
Dove, Turtle.....	
Dove (small ground).....	
Dabchick.....	
Duck (mallard).....	
Duck (red-head).....	
Duck (black-head).....	
Duck (canvas-back).....	
Duck (wood or summer).....	
Duck (buffalo-head).....	
Duck (surf).....	
Duck (ruddy).....	
Eagle (gray).....	
Eagle (black).....	
Eagle (white-headed).....	
Eagle (white-tailed).....	
Fly-catcher.....	
Field-lark.....	
Flicker.....	
Fulman.....	
Finch.....	
Finch (grass).....	
Goldfinch.....	
Grossbeak.....	
Grackle.....	
Grouse.....	
Grouse (pinnated).....	
Grouse (white).....	
Godwit.....	

ANIMALS. -Buds-Continued.

ENGLISH.	REMARKS.
Goose (white-fronted)	
Goose (blue)	
Goose (white)	
Goose, Canada	
Gull	
Gull (heron)	
Gull (ring-billed)	
Grebe	
Humming-bird	
Hawk (marsh)	
Hawk (chicken)	
Hawk (hen)	
Hawk (pigeon)	
Hawk (sparrow)	
Hawk (duck)	
Hawk (red-tailed)	
Hawk (swallow-tailed)	
Hawk (fish)	
Hawk (night)	
Heron (great blue)	
Heron (little blue)	
Heron (great white)	
Heron (little white)	
Heron (green)	
Night-heron	
Ibis (glossy)	
Indian-hen	
Kingbird	
Kingfisher	
Linnet	
Loon	
Lark	
Martin (purple)	

ANIMALS.—*Birds*—Continued.

ENGLISH.		REMARKS.
Martin (bee).....		
Meadow-lark.....		
Magpie.....		
Mother Cary's chickens.....		
Mutch-hotch.....		
Oriole.....		
Osprey.....		
Oyster-catcher.....		
Owl (great-horned).....		
Owl (screech).....		
Owl (eared).....		
Owl (white snowy).....		
Owl (burrowing).....		
Ouse).....		
Pecwee.....		
Partridge.....		
Prairie-hen.....		
Pheasant.....		
Ptarmigan.....		
Plover (black-bellied).....		
Plover (golden).....		
Plover (killdee).....		
Plover (ring-necked).....		
Plover (mountain).....		
Pintail.....		
Pelican (white).....		
Pelican (brown).....		
Petrel.....		
Pigeon.....		
Pigeon (sea).....		
Quail.....		
Redbird.....		
Redbird (cardinal).....		

ANIMALS.—Birds—Continued.

ENGLISH.	REMARKS.
Reed-bird	
Raven	
Robin	
Road-runner	
Rail	
Swallow	
Swallow (chimney)	
Swallow (barn)	
Swallow (white-bellied)	
Swallow (green-backed)	
Swallow (cliff)	
Swallow (bank)	
Swallow (sea)	
Shrike	
Song-sparrow	
Snow-bird	
Scissor-bird	
Sage-cock	
Snipe	
Sandpiper	
Sanderling	
Swan	
Scoter	
Shoveler	
Shag	
Shearwater	
Sparrow	
Parakeet	
Turkey-buzzard	
Turkey	
Turn-stone	
Tattler	
Teal	

ANIMALS.—*Parts of the body, &c., of birds.*

[illegible]

State how animals are classified.

THE FIRMAMENT, METEOROLOGIC AND OTHER PHYSICAL PHENOMENA AND OBJECTS—Continued.

[illegible]

XVII.—GEOGRAPHIC NAMES.

A very interesting field of investigation is found in learning the proper names given by the Indians to the several springs, rivers, lakes, mountains, indentations of the coast, &c., known to them. A blank is left for this purpose.

[illegible]

NIX.—NUMERALS.

Any intelligent Indian can easily count a hundred, and repeat this for as many hundreds as may be desired. When counting abstractly a common termination for the numeral will sometimes be used, signifying *in count*, *in number*, or something equivalent. If set to count a series of objects, he may repeat the name of the object each time. No difficulty will be experienced in obtaining the cardinal numbers, but much patience is required to obtain the ordinals and other categories of numbers.

In some Indian languages there is more than one set of cardinal numbers. Animate objects may be counted with one set, inanimate with another. They may have a particular set for counting fish, or for counting skins; perhaps a set for counting standing objects, and another set for counting sitting objects, &c. When these different sets are used the words may simply have different terminations, or other incorporated particles, or the different sets may be composed of very distinct words. Occasionally an extra set of numerals may be found, the name of each number being a long phrase or sentence descriptive of the method of counting by fingers and toes.

The method of using the fingers and toes in counting should be carefully studied and minutely explained; also the method of indicating numbers to others in like manner. The most common method for counting in this manner is to turn down the little finger of the left hand for one, the next finger in order for two, the next finger for three, the next for four, and the thumb for five; then the thumb of the right hand for six, &c., until the little finger of the right hand is turned down for ten. This may be varied by turning down the little finger of the right hand for six and the thumb of the right hand for ten.

In indicating numbers to others by the use of the fingers the little finger of the left hand may be extended and the other fingers turned down for one; the other numbers will be expressed by extending the fingers in the same order in which they were turned down for counting. In counting by tens, the Indian may close the fingers of both hands to indicate each ten, or he may extend the fingers of each hand, holding them with the palms turned toward the person spoken to.

In counting, some Indians resort to the fingers only, others to the fingers and toes. The first may result in a decimal system; the second in a vigesimal. All the facts relating to counting should be discovered and recorded.

Cardinal numbers.

ENGLISH.	REMARKS.
One	
Two	
Three	
Four	
Five	
Six	
Seven	
Eight	
Nine	
Ten	
Eleven	
Twelve	
Thirteen	
Fourteen	
Fifteen	
Sixteen	
Seventeen	
Eighteen	
Nineteen	
Twenty	
Twenty-one	
Twenty-two	
Twenty-three	
Twenty-four	

NUMERALS.—*Cardinal Numbers*—Continued.

ENGLISH.		REMARKS.
Twenty-five		
Twenty-six		
Twenty-seven		
Twenty-eight		
Twenty-nine		
Thirty		
Forty		
Fifty		
Sixty		
Seventy		
Eighty		
Ninety		
One hundred		
One hundred one		
One hundred two		
One hundred three		
One hundred four		
One hundred five		
One hundred six		
One hundred seven		
One hundred eight		
One hundred nine		
One hundred ten		
One hundred eleven		
One hundred twelve		
Two hundred		
Three hundred		
Four hundred		
Five hundred		
Six hundred		
Seven hundred		
Eight hundred		
Nine hundred		
One thousand		

NUMERALS.—*Ordinal numbers.*

ENGLISH.	REMARKS.
First	
Second	
Third	
Fourth	
Fifth	
Sixth	
Seventh	
Eighth	
Ninth	
Tenth	
Eleventh	
Twelfth	
Thirteenth	
Fourteenth	
Fifteenth	
Sixteenth	
Seventeenth	
Eighteenth	
Nineteenth	
Twentieth	
Thirtieth	
Fortieth	
Fiftieth	
One-half (in length)	
One-half (in quantity)	
A part (in length)	
A part (in quantity)	
All	
Some	
None	

XX.—MEASURES.

It is very desirable to discover primitive methods of measuring; that is, the methods used prior to the advent of the white man. Sometimes a finger's length is used. In this case describe which finger is used, and how the measure is applied.

A frequent method for measurement of lengths is from the extremity of the long finger to the first wrinkle of the wrist, i.e. a hand. Another hand unit has been discovered: Having the fingers and thumb extended, the beginning is at the extremity of the thumb, and the string is passed along its outer margin to the first wrinkle of the wrist, then crossing the wrist along this wrinkle to the outer margin of the palm of the hand, along this margin to the extremity of the little finger and along the tips of the fingers to the extremity of the first finger, then along the outer margin of the first finger and inner margin of the thumb to the point of beginning; that is, the measure is the length of the outline of the hand. Let us call this "around the hand unit."

There is a unit of measurement used which may be represented by the distance from the long finger to the elbow, measured on the inside or outside of the arm, or it may be from the tips of the joined thumb and fore-finger to the elbow, measured on the inside, *i.e.* a half arm's length.

Another unit used is the distance from the meeting of the tips of the thumb and fore-finger to the armpit; *i. e.* an arm's length; still another from the meeting of the tips of the thumb and fore-finger of one hand to the meeting of the tips of the thumb and fore-finger of the other hand, along the outstretched arms and across the breast, *i. e.* a double arm's length.

Distances along the ground are often measured in paces. All the tribes probably have measures for circumferences, and also for quantities. Distances between places were measured in days' journeys and fractions of day's journey; the latter were often indicated by pointing out some part of the sun's daily path along the firmament.

MEASURES—Continued.

XXI.—DIVISION OF TIME.

Indians have many ways of dividing the year into parts; they may have two, three, four, or even five seasons; they may divide the year into thirteen moons, and, in addition to one or both of the above methods, they may have many ways of designating particular times, as the strawberry time, the hazel-nut time, the kamas root time, &c. Their methods should be discovered and carefully described, recording the terms in the following blank.

ENGLISH.	REMARKS.
A year	
A moon	
First half of moon	
Second half of moon	
First quarter of moon	
Second quarter of moon	
Third quarter of moon	
Fourth quarter of moon	
Day	
Night	
A day (24 hours)	
Dawn	
Sunrise	
Morning	
Mid-forenoon	
Noon	
Afternoon	
Sunset	
Dusk	
Evening	
Midnight	
Day before yesterday	
Yesterday	
To-day	
To-morrow	
Day after to-morrow	
Now (adverb)	
Past time (adverb)	
Future time (adverb)	
.....	
.....	
.....	

DIVISION OF TIME—Continued.

XXII.—STANDARD OF VALUE.

One or more of the most important skins used by the Indians were often employed as standards of value, especially the beaver skin and the buckskin. Shells and other articles worked into beads and made into strings were also used. In some tribes eagle feathers were the standard of value.

The collector should discover, if possible, what standards of value were used, whether one or more, and give a clear account of them, at the same time recording the terms used.

STANDARD OF VALUE—Continued.

XXIII.—NEW WORDS.

It is interesting to discover the Indian methods of coining new words and adapting old words to new uses. For this purpose the following list of terms are given:

ENGLISH.	REMARKS.
Cat.....	
Sheep.....	
Horse.....	
Saddle.....	
Bridle.....	
Girth.....	
Lariat.....	
Whip.....	
Hopples.....	
Spur.....	
Crupper.....	
Axe.....	
Auger.....	
Iron arrow-head.....	
Awls of metal.....	
Broom.....	
Comb.....	
Clock.....	
Knife, pocket.....	
Fork.....	
Gimlet.....	
Hoe.....	
Hammer.....	
Brass kettle.....	
Iron kettle.....	
Tin plate.....	
Plow.....	
Reaper.....	
Scissors.....	
Table.....	
Watch.....	
Pistol.....	

NEW WORDS—Continued.

ENGLISH.	REMARKS.
Gun	
Ramrod	
Cannon	
Bullet	
Cap, percussion	
Powder	
Brass	
Gold	
Iron	
Lead	
Silver	
Cap or hat	
Necktie or neckerchief	
Coat	
Vest	
Shirt	
Pants	
Shoes	
Boots	
Slippers	
Stockings	
Bonnet	
Ribbons	
Shawl	
Dress gown	
Eread	
Match, friction	
Sugar	
Tobacco	
Whisky	
Finger-ring	
Mirror	
.....	

XXIV.—PHRASES AND SENTENCES.

Pronouns, adjectives, adverbs, prepositions, conjunctions, interjections, and verbs are used only to a limited extent as distinct parts of speech. The degree to which they are differentiated is very unequal among the different languages.

Adjectives are also verbs, that is, they may be used with a noun simply for description or qualification, and they may also be used to predicate or assert; in such cases they may be conjugated as verbs. Adjectives may also be incorporated with nouns.

Distinct pronouns are found. In most languages, in addition to the simple pronouns there will be found an elaborate system of incorporated pronominal particles; when these are used, the separate pronouns may, or may not, be used in any particular case, but they always exist. The pronominal particles may be simple sounds represented by a single letter, or they may constitute one or more additional syllables, and may be prefixed, suffixed, or infixed, to form a part of the word. Nouns may also be used as verbs and conjugated, but such use is more limited.

There are some adverbs used independently of verbs, but often adverbial meanings are given by the incorporation of particles in the verb, or by the use of verbs which contain in themselves adverbial qualifications; the distinct adverbs may also be used as verbs, in which case they may be conjugated.

Some prepositions are found as distinct words, but usually the office of the preposition is performed by some particle contained in the verb, or noun, and often the verb carries with it a prepositional meaning requiring a noun to complete the sense. The distinct prepositions may also be used as verbs, in which case they may be conjugated.

Few independent conjunctions are found; parts of sentences are usually joined together, and the relation of the clauses determined by inflections of the verb, or by the use of incorporated relative or demonstrative pronouns. In like manner, only a few interjections are found, but verbs often have exclamatory forms, and there are many exclamatory phrases and sentences. The interjections, whether distinct words or incorporated particles, have also adverbial meanings.

Indian languages have no verb which is used as a copula, as we use the verb "to be" in English. Nouns, adjectives, adverbs, prepositions, &c., that would be placed in the predicate after the verb "to be" in English, are in the Indian tongues used as verbs themselves; they are predicants, that is, they perform the office of predication. In obtaining the phrases and sentences below this must be constantly remembered.

In view of these facts, so briefly stated, it does not seem wise to give a list of words in each of the parts of speech other than the nouns already given, but instead a series of phrases and sentences are arranged below, designed to bring out important facts of structure and obtain valuable words.

Where the word John and James is found in the schedule below the collector may employ any Indian name of a person, being careful to erase the word John or James, and insert the Indian word used in the English sentence. In the same manner, when the word Washington occurs, use any Indian name of a place, inserting it in the English sentence.

ENGLISH.	REMARKS.
One man	
Two men	
Three men	
Few men	
Many men	
All the men	
One woman	
Two women	
Three women	
Few women	
Many women	
All the women	
One boy	
Two boys	
Three boys	
Few boys	
Many boys	
All the boys	
One dog	
Two dogs	
Three dogs	

PHRASES AND SENTENCES—Continued.

ENGLISH.	REMARKS.
Few dogs	
Many dogs	
All the dogs	
One arrow	
Two arrows	
Three arrows	
Few arrows	
Many arrows	
All the arrows	
One hat	
Two hats	
Three hats	
Few hats	
Many hats	
All the hats	
One leaf	
Two leaves	
Three leaves	
Few leaves	
Many leaves	
All the leaves	
One stone	
Two stones	
Three stones	
Few stones	
Many stones	
All the stones	
Male dog	
Female dog	
Male horse	
Female horse	
Male cat	
Female cat	

PHRASES AND SENTENCES—Continued.

ENGLISH.		REMARKS.
Male deer.....		
Female deer.....		
Male eagle.....		
Female eagle.....		
This man.....		
That man.....		
These two men.....		
Those two men.....		
These men.....		
Those men.....		
This woman.....		
That woman.....		
These two women.....		
Those two women.....		
These women.....		
Those women.....		
This boy.....		
That boy.....		
These two boys.....		
Those two boys.....		
These boys.....		
Those boys.....		
This dog.....		
That dog.....		
These two dogs.....		
Those two dogs.....		
These dogs.....		
Those dogs.....		
This horse.....		
That horse.....		
These two horses.....		
Those two horses.....		
These horses.....		

PHRASES AND SENTENCES—Continued.

ENGLISH.	REMARKS.
Those horses	
This knife	
That knife	
These two knives	
Those two knives	
These knives	
Those knives	
This axe	
That axe	
These two axes	
Those two axes	
These axes	
Those axes	
I am striking you (with closed hand or fist)	
I struck you	
I will strike you	
You are striking me	
You struck me	
You will strike me	
I am striking him (this person)	
I struck him	
I will strike him	
I am striking him (that person)	
I struck him	
I will strike him	
You and I are striking him (this person)	
You and I struck him	
You and I will strike him	
We (more than two) are striking him (that person)	
We (more than two) struck him	
We (more than two) will strike him	
I struck you repeatedly	
John struck James	

PHRASES AND SENTENCES—Continued.

ENGLISH.		REMARKS.
I am striking myself		
I struck myself		
I will strike myself.....		
You are striking yourself.....		
You struck yourself.....		
You will strike yourself.....		
He is striking himself.....		
He struck himself.....		
He will strike himself.....		
I was struck.....		
You and I were struck		
We were struck.....		
You were struck.....		
They were struck.....		
I am striking you (with a club)		
I struck you.....		
I will strike you		
You are striking me.....		
You struck me		
You will strike me		
I am striking him (that person).....		
I struck him		
I will strike him.....		
You and I are striking him (this person).....		
You and I struck him.....		
You and I will strike him		
We (more than two) are striking him (that person).....		
We (more than two) struck him.....		
We (more than two) will strike him.....		
You (more than two) are striking him.....		
You (more than two) struck him.....		
You (more than two) will strike him		
I struck you repeatedly.....		

PHRASES AND SENTENCES—Continued.

ENGLISH.		REMARKS.
John struck James.....		
I am striking myself.....		
I struck myself.....		
I will strike myself.....		
You are striking yourself.....		
You struck yourself.....		
You will strike yourself.....		
He is striking himself.....		
He struck himself.....		
He will strike himself.....		
I was struck.....		
You and I were struck.....		
We were struck.....		
You were struck.....		
They were struck.....		
I am kicking you.....		
I kicked you.....		
I will kick you.....		
You are kicking me.....		
You kicked me.....		
You will kick me.....		
I am kicking him (this person).....		
I kicked him.....		
I will kick him.....		
I am kicking him (that person).....		
I kicked him.....		
I will kick him.....		
You and I are kicking him (this person).....		
You and I kicked him.....		
You and I will kick him.....		
We (more than two) are kicking him (this person).....		
We (more than two) kicked him.....		
We (more than two) will kick him.....		

PHRASES AND SENTENCES—Continued.

ENGLISH.		REMARKS.
He is kicking you and me.....		
He kicked you and me.....		
He will kick you and me.....		
He is kicking him and me.....		
He kicked him and me.....		
He will kick him and me.....		
I kicked you repeatedly.....		
John kicked James.....		
I am kicking myself.....		
I kicked myself.....		
I will kick myself.....		
You are kicking yourself.....		
You kicked yourself.....		
You will kick yourself.....		
He is kicking himself.....		
He kicked himself.....		
He will kick himself.....		
I was kicked.....		
You and I were kicked.....		
We were kicked.....		
You were kicked.....		
They were kicked.....		
He is kicking us (several persons).....		
He kicked us.....		
He will kick us.....		
He kicked us repeatedly.....		
I am hungry.....		
You and I are hungry.....		
We are hungry.....		
You are hungry.....		
They are hungry.....		
I was hungry.....		
I will be hungry.....		

PHRASES AND SENTENCES—Continued.

ENGLISH.	REMARKS.
John is hungry	
I am eating bread	
You and I are eating bread	
We are eating bread	
You are eating bread	
They are eating bread	
I was eating bread	
You and I were eating bread	
We were eating bread	
You were eating bread	
They were eating bread	
John is eating bread	
John is eating meat	
John is eating mush	
John is eating fish	
John is eating soup	
The horse is eating corn	
The cow is eating grass	
The bird is eating corn	
The bird is eating wheat	
I am thirsty	
I was thirsty	
I will be thirsty	
John is thirsty	
The horse is thirsty	
I am drinking water	
I was drinking water	
I will drink water	
John is drinking water	
The horse is drinking water	
The cat is drinking water	
The dog is drinking water	
The bird is drinking water	

PHRASES AND SENTENCES—Continued.

ENGLISH.		REMARKS.
I am talking		
I was talking		
I will talk		
You were talking		
He is talking		
John is talking		
I am crying		
I was crying		
I will cry		
You were crying		
He is crying		
John is crying		
I am singing		
I was singing		
I will sing		
You were singing		
He is singing		
John is singing		
I am shouting		
I was shouting		
I will shout		
You were shouting		
He is shouting		
John is shouting		
I am whispering		
I was whispering		
I will whisper		
You were whispering		
He is whispering		
John is whispering		
I am laughing		
I was laughing		
I will laugh		

PHRASES AND SENTENCES—Continued.

ENGLISH.		REMARKS.
You were laughing.....		
He is laughing.....		
John is laughing.....		
I am smiling.....		
I was smiling.....		
I will smile.....		
You were smiling.....		
He is smiling.....		
John is smiling.....		
I am walking.....		
I was walking.....		
I will walk.....		
You were walking.....		
He is walking.....		
John is walking.....		
The cloud is drifting (slowly).....		
The cloud is flying (fast).....		
John is whistling.....		
John is running.....		
John is jumping.....		
John is jumping over a log.....		
The horse is walking.....		
The horse is running.....		
The horse is jumping over a log.....		
The meadow-lark is flying.....		
The snake is crawling.....		
The fish is swimming.....		
The dog is barking.....		
The horse is neighing.....		
The eagle is screaming.....		
The frog is croaking.....		
The bee is humming.....		
My horse is black.....		

PHRASES AND SENTENCES—Continued.

ENGLISH.		REMARKS.
Your horse is white.....		
My knife is large.....		
Your knife is small.....		
His knife is sharp.....		
John's knife is dull.....		
Our tent is old.....		
Your tent is new.....		
Their tents are small.....		
Their tents are large.....		
Our horses are here.....		
Your horses are gone.....		
Their horses are gone.....		
My hat is here.....		
Your hat is there.....		
This is my hat.....		
That is his hat.....		
These are my horses.....		
These are your horses.....		
Whose cow is this?.....		
This is my cow.....		
Whose horse is this?.....		
This is his horse.....		
Whose dog is this?.....		
This is John's dog.....		
Whose bow is this?.....		
This is his bow.....		
Whose arrow is this?.....		
This is my arrow.....		
Whose knife is this?.....		
This is my knife.....		
Whose hat is this?.....		
This is your hat.....		
Which is your horse?.....		

PHRASES AND SENTENCES—Continued.

ENGLISH.	REMARKS.
Which is his coat?.....	
Which is your father?.....	
Which is your mother?.....	
Which is your arrow?.....	
Who stole my horse?.....	
John stole my horse.....	
I have a dog.....	
You have a dog.....	
He has a dog.....	
You and I have horses.....	
We have horses.....	
How many dogs have you?.....	
How many horses have you?.....	
How many arrows has John?.....	
He has horses.....	
They have horses.....	
I have a gun.....	
We have guns.....	
I have a hat.....	
They have hats.....	
When did you eat?.....	
When did you drink?.....	
When will he arrive?.....	
Where is my whip?.....	
Here is your whip.....	
Where is my coat?.....	
Your coat is here.....	
The book is here.....	
The book is there.....	
Where is the horse?.....	
Where is the dog?.....	
Where is the lodge?.....	
I am cold.....	

PHRASES AND SENTENCES—Continued.

ENGLISH.		REMARKS.
You were cold.....		
He will be cold.....		
I am warm.....		
You were warm.....		
He will be warm.....		
I am tall.....		
You were tall.....		
The boy will be tall.....		
The tree is tall.....		
The horse is high.....		
The house is high.....		
The rock is high.....		
The horse is large.....		
The horse is small.....		
The hat is large.....		
The hill is high.....		
The hill is low.....		
The mountain is high.....		
The mountain is low.....		
It rains now.....		
It rained yesterday.....		
It will rain to-morrow.....		
It snows now.....		
It snowed yesterday.....		
It will snow to-morrow.....		
It hails now.....		
It hailed yesterday.....		
It will hail to-morrow.....		
It is cold now.....		
It was cold yesterday.....		
It will be cold to-morrow.....		
It is warm now.....		
It was warm yesterday.....		

PHRASES AND SENTENCES—Continued.

ENGLISH.		REMARKS.
It will be warm to-morrow		
The north wind blows		
The north wind is blowing now		
The west wind was blowing yesterday		
The south wind will blow to-morrow		
I am throwing a stone		
I threw a stone		
I will throw a stone		
How many stones did he throw?		
Why did he throw a stone?		
I am throwing a club		
I threw a club		
I will throw a club		
How many clubs did he throw?		
Why did he throw a club?		
He is putting his hat on the table		
He will put his hat on the table		
You will put your hat on the table		
I will put my hat on the table		
He is putting his hat under the table		
He will put his hat under the table		
You will put your hat under the table		
I will put my hat under the table		
He is putting his knife in his pocket		
He will put his knife in his pocket		
You will put your knife in your pocket		
I will put my knife in my pocket		
The deer is standing in the bushes		
The man is standing on a log		
The axe is on the ground		
The whip is under the table		
The horse is on the hill		
The horse was on the hill		

PHRASES AND SENTENCES—Continued.

ENGLISH.		REMARKS.
The horse will be on the hill.....		
The awl is under the buckskin.....		
The awl was under the buckskin.....		
The awl will be under the buckskin.....		
The lodge (or house) is by the river (or creek).....		
The lodge (or house) was by the river (or creek).....		
The lodge (or house) will be by the river (or creek).....		
Wood floats in the water.....		
A stone sinks in the water.....		
An arrow floats in the water.....		
A gun sinks in the water.....		
I see a deer.....		
He saw twelve deer.....		
You will see twelve deer.....		
I hear an owl crying.....		
John heard a man shouting.....		
I will go home.....		
He went home.....		
I will go to Washington.....		
He went to Washington.....		
I will go to Washington with John.....		
I will go to Washington with my father.....		
I will go home with John.....		
I will go home with my father.....		
I will go home before John.....		
I will go home before my father.....		
I will go home after John.....		
I will go home after my father.....		
I will ride my horse.....		
He rode my horse.....		
Why did he not ride his horse?.....		
I will ride him.....		
I will ride to Washington.....		

PHRASES AND SENTENCES—Continued.

ENGLISH.		REMARKS.
The knife is broken.....		
The arrow is broken.....		
The saddle is broken.....		
The stirrup is broken.....		
The bridle rein was broken.....		
The spur was broken.....		
I will shoot a deer if I see one.....		
The dog will bite you if you kick him.....		
I will sleep if you will be still.....		
I am angry because you struck me.....		
I will go home when my horse is caught.....		
I will kill the man who stole my horse.....		
The horse threw the boy.....		
That horse will throw you.....		
I will ride the horse that threw the man.....		
What is it?		
Who is it?		
Who are they?		
What is the name of this?		
What is that man's name?		
I have a hat on.....		
You have a hat on.....		
You have a shirt on.....		
He has moccasins on.....		
We live at Washington.....		
They live at Washington.....		
The squirrel lives in a tree.....		
The bear lives in the woods.....		
In winter the bear lives in a cave.....		
You ought to sit down because you are tired.....		
I do not believe what he says.....		
I am going a hunting because I am hungry.....		
I will go a hunting deer.....		

PHRASES AND SENTENCES—Continued.

REMARKS.

In obtaining the phrases and sentences above, the student will be initiated into the best method of mastering an Indian tongue. The attempt to learn Indian words and then to construct sentences from them will only result in failure. Learn phrases and sentences first, after which you may easily discover the words and parts from which they are constructed. The student has also learned that the Indian tongue contains very few synonyms of English words, which is also true to an important extent in the more cultivated languages of the Indo-European stock; but the statement has a much wider application when we speak of Indian languages.

In proceeding further with the study of Indian languages get words in sets as much as possible, but get the sentences before the words.

The verbs "to go" and "to come," in all their forms and modifications will constitute a valuable contribution to linguistics. Generally each verb will be represented by a great number of words; for example, the verb "to go" may be represented by one word signifying to go home, another to go away from home; one to go to a place other than home, another to go from a place other than home; one to go from this place, without reference to home; one to go up, to ascend, another to go down, to descend; one to go around, and perhaps there will be a verb to go up a hill, another to go up a valley, another to go up a river, &c.

Purpose may be expressed in the verb, as to go on a visit, to go for water, &c., and the manner may also be expressed, as to go on foot, to go on horseback, to go in a canoe, &c. Distinct words may be used for each of these purposes, or a fewer number used, and these varied by incorporated particles. In like manner the English verb to break may be represented by several words, each of which will indicate the manner of performing the act, or the instrument with which it is done. Distinct words may be used, or a common word varied with incorporated particles. The verb "to strike," which appears so often in the schedule, may be represented by several words, as a word signifying to strike with the fist, to strike with a club, (to club,) to strike with the open hand, (to slap,) to strike with a whip, (to whip,) to strike with a switch, (to switch,) to strike with a flat instrument, (to paddle,) &c., &c., but there may be no word which signifies to strike in general.

In the phrases and sentences given above only the present, past, and future tenses are called for. In some languages there are elaborate systems of tenses, denoted by inflections; in others the tense-system, as denoted by inflections, is simpler; and more complex tense distinctions are given by the use of adverbs.

There are about five hundred Indian languages spoken in the United States, but only a few of them have been carefully studied, and it is no easy task to give all the characteristics even of those languages which are known; but certain general facts will be observed in all, namely:

The parts of speech are meagerly differentiated—that is, one word may contain within itself two, three, or more parts of speech. A noun with its qualifications and limitations may form but one word; and the verb with its qualifications and limitations, with its subject, and with its direct and indirect object, may be but one word. Words may be used now as one part of speech, then as another. Adjectives may be declined as adjectives or conjugated as verbs.

By the use of all the other parts of speech as verbs the copula, or predicant, expressed in English by the verb "to be," becomes unnecessary, and such verbs are not found.

Incorporated particles are used to a great extent for a variety of purposes, and especially incorporated pronouns, the latter giving to many of the languages what has been known as a system of "transitions." These particles point out with special care the person and number and other characteristics of both the subject and object.

As an Indian word may be exceedingly complex or synthetic, containing in itself many parts of speech, when new ideas are to be expressed and hence new words coined, these new words may contain many elements, so that often their words seem to be excessively compounded. The circumstances under which we study Indian languages serve to exaggerate this characteristic. With the advent of civilized people among them new objects were seen, new ideas and thoughts were entertained, and new words needed for their expression. Such new words are often found to be elaborately compounded. Again, the missionaries or teachers among the Indians, having to convey to them ideas and thoughts new to the Indian mind, and for the expression of which the Indians had no adequate words, were compelled to coin such words, so that in many Indian languages there are words which have been introduced among them by missionaries or teachers coined from pre-existing words, and these also are often elaborately compounded. Such facts led the earlier students of Indian languages to classify them as distinct from all others, and they were called *agglutinated*.

Still another characteristic must be mentioned. Indian languages are elaborately inflected. Nouns, adjectives, and adverbs are declined, verbs are conjugated, and when different parts of speech enter into one word the different methods of inflection belonging to each appear in the single locution.

Indian languages then are excessively synthetic, excessively compounded, excessively inflected, many incorporated particles are used, and there is no verb used as a copula; all of which simply means that the parts of speech are very imperfectly differentiated. In these characteristics they differ not in kind, but only in degree, from the Indo-European tongues.



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